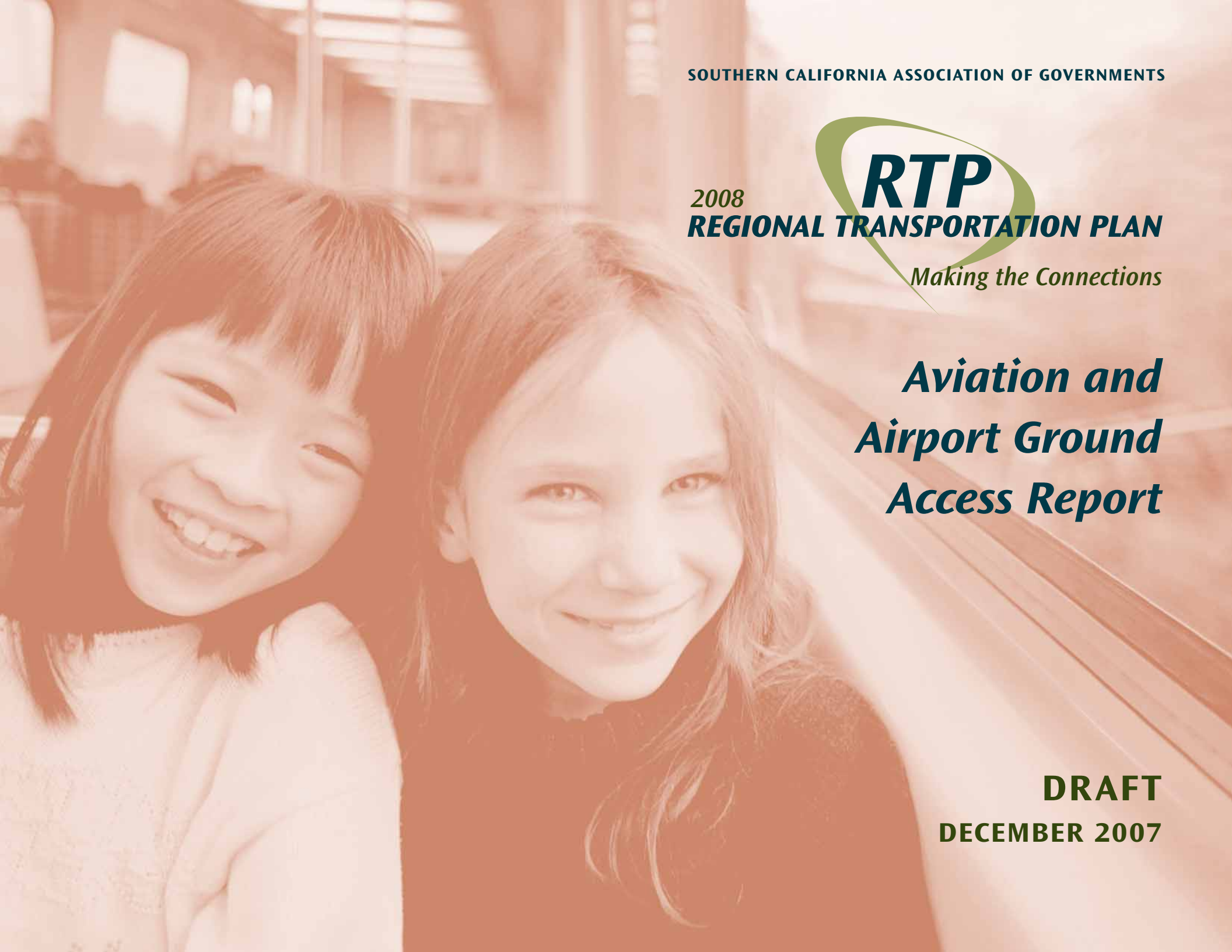


SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

2008
RTP REGIONAL TRANSPORTATION PLAN

Making the Connections

Aviation and Airport Ground Access Report

DRAFT

DECEMBER 2007

AVIATION

The SCAG Region supports the nation's largest regional airport system in terms of number of airports and aircraft operations, operating in a very complex airspace environment. Exhibit 1 shows the SCAG regional air carrier airport system. The system has six established air carrier airports including Los Angeles International (LAX), Bob Hope (formerly Burbank), John Wayne, Long Beach, Ontario and Palm Springs. There are also four new and emerging air carrier airports in the Inland Empire and North Los Angeles County. These include San Bernardino International Airport (formerly Norton AFB), March Inland Port (joint use with March Air Reserve Base), Southern California Logistics Airport (formerly George AFB) and Palmdale Airport (joint use with Air Force Plant 42). The regional system also includes 45 general aviation airports and two commuter airports, for a total of 57 public use airports. Detailed profiles of the air carrier airports in the region can be found at the end of this chapter.

Southern California airports play a crucial role in international trade, particularly with Pacific Rim countries, and to the regional economy. The value of airborne commodity exports out of the Los Angeles Customs District are about equal to waterborne exports, and airborne export values would be significantly greater if service exports, including impacts from tourism, were added to total export values.

REGIONAL AVIATION CHALLENGES

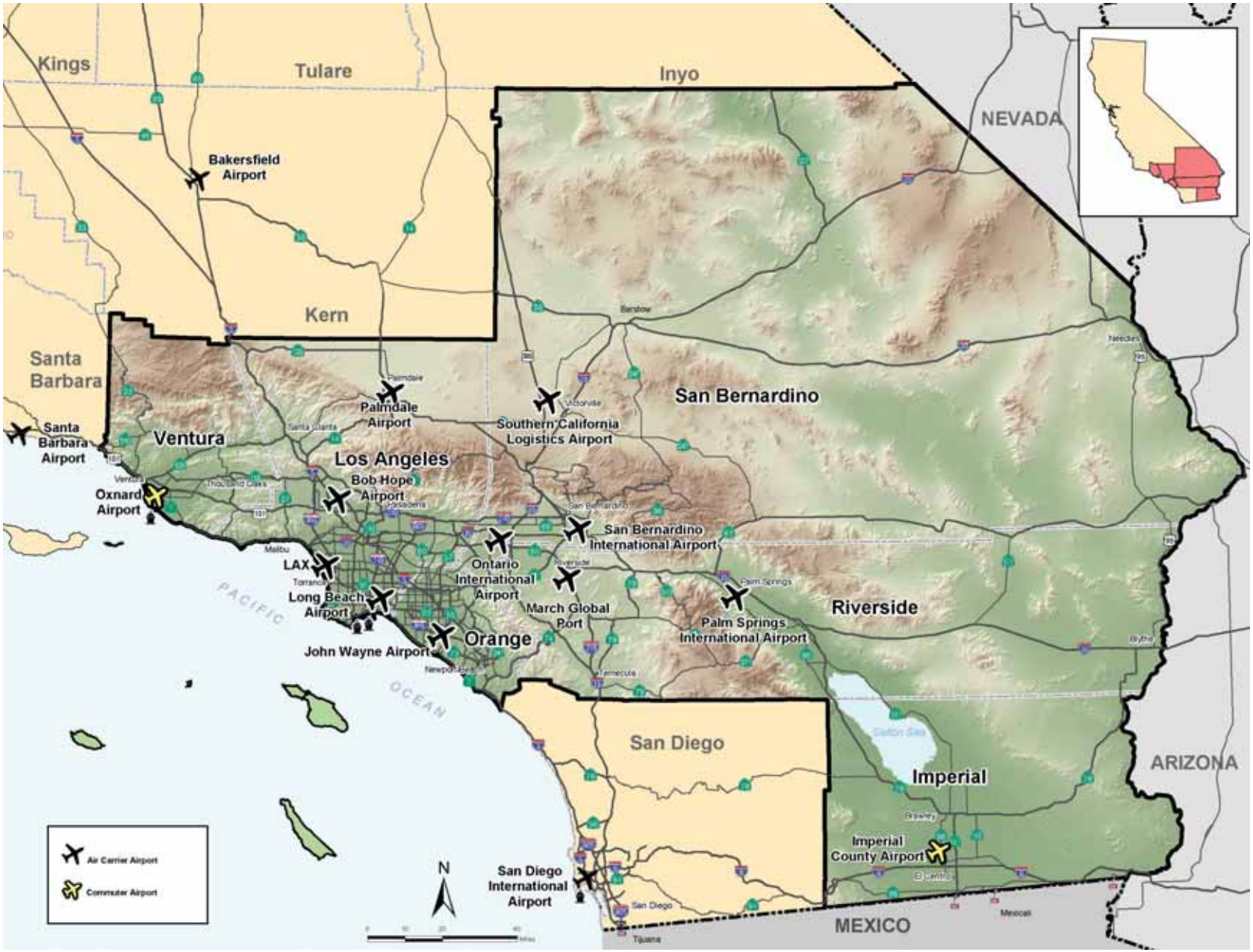
There are significant challenges in meeting the future airport capacity needs of Southern California. Work on SCAG's 2004 Regional Transportation Plan (RTP) concluded that an Aviation Decentralization Strategy is needed to meet the forecast doubling of air passenger demand by 2030, from the current 90 million annual passengers (MAP) to 170 MAP. The four urban air carrier airports in Los Angeles and Orange counties—LAX, Bob Hope, Long Beach and John Wayne—are all highly constrained. Their collective acreage amounts to 5,540 acres, which is less than 17% of the 34,000 acres of Denver International, and less than the 7,700 acres of Chicago O'Hare. At 3,500 acres, LAX is a very small international airport despite being the third busiest airport in the country, and fifth busiest in the world in terms of passengers served. All of these urban airports have little room to expand because of severe encroachment by surrounding communities. In addition, two of these airports—Long Beach and John Wayne—have strict limits on allowable flights that are legally enforceable (one is a city ordinance and the other a court settlement agreement) since they predate the Federal Airport Noise and Capacity Act of 1990 (ANCA).

The challenge of regional aviation demand in Southern California is not limited to just the SCAG region. It is estimated that 15 to 20 percent of San Diego's air passengers and 2/3 of its air cargo is currently served by SCAG region airports because of inadequate airport capacity in San Diego. More than 40 commuter flights a day originate in San Diego County and land at LAX, because of inadequate long-haul and international service in San Diego. This places additional burdens on the limited runway capacity of LAX. San Diego International Airport is rapidly approaching its physical capacity constraint of 23 MAP, and a recent effort by the San Diego County Regional Airport Authority to find a new replacement airport was not successful. If San Diego does not solve its looming airport capacity problem, it will make the problem in the SCAG Region much worse.

AIRPORT OPPORTUNITIES

Fortunately, the region has available capacity to serve future demand at the new and emerging suburban airports in the Inland Empire (San Bernardino and Riverside counties) and North Los Angeles County. Ontario International Airport can accommodate up to 30 MAP (currently at 7.2 MAP) and help relieve LAX by becoming the region's second major international airport. Palmdale Airport, San Bernardino International, March Inland Port, and Southern California Logistics not only have ample available capacity, but can serve future demand with far fewer environmental impacts compared to the highly constrained urban airports. These airports can also serve future demand with relatively modest capital investments since they have much of the essential infrastructure already in place.

EXHIBIT 1 SCAG REGION REGIONAL AIR CARRIER SYSTEM



Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

The 2004 RTP estimates that investments at the four new and emerging airports, needed to accommodate the forecast demand of 170 MAP, total about $4 billion in improvements. Adding needed investments at the other airports in the system (but not LAX), the required capital requirements at region airports total about $6.3 billion. This is a modest sum for serving an 80 MAP increase in demand over the next 25 years, compared to the exorbitant cost of building new airports to accommodate this demand.

The primary challenge of decentralizing demand to these airports relates to the fact that the core of aviation demand will continue to reside in the urban areas of Los Angeles and Orange counties. The greatest population and employment growth over the next 25 years is forecast to occur in the Inland Empire. The region is forecast to grow at a 1.25% annual growth rate as it adds about seven million people over from 2000 to 2035 (reaching a total of 23.5 million). Riverside and San Bernardino counties are forecast to grow by 3.4% and 1.9%, respectively, while Los Angeles and Orange counties will add population at rates less than 1%. The Inland Empire will also add jobs at significantly higher rates than the regional average.

However, by 2035 the bulk of future aviation demand (82%) will still remain in Los Angeles and Orange counties (currently 90% of total regional demand). The main reason for this is that Los Angeles and Orange counties will continue to generate higher rates of air passenger trips per capita compared to the rest of the region. Their high trip propensities relate to greater levels of disposable income, and high concentrations of activities that greatly depend on air travel. These activities include international trade, tourism, entertainment, business services and high technology.

AIRPORT DECENTRALIZATION AND GROUND ACCESS STRATEGY

The future challenge of meeting future aviation demand in the SCAG Region is inextricably tied to airport ground access, since in order to meet that demand the region will need to get future air passengers from the urban areas of Los Angeles and Orange counties to available airport capacity in the Inland Empire and North Los Angeles County. The challenge is complicated by the fact that the regional roadway system will be become increasingly unreliable, with daily delay on the system expected to more than double. This will place a great burden on the air traveler, who will have to allow for more time to get to the airport to catch his or her flight. It will make it difficult to expand the new airports with available capacity, since until they fully mature they will have few alternative flights to offer air travelers who miss their flights because of unreliable ground access. Unless the regional airport ground access system is substantially improved, many potential air travelers will choose not to fly at all, which will translate to substantial economic loss to the region. The 2004 RTP estimates that a constrained 2030 regional airport system with conservative assumptions about future airport ground access improvements translates to a loss of $18 billion and 131,000 jobs to the economy of Southern California.

SCAG adopted Regional Aviation Decentralization Strategy calls for making substantial airport ground access improvements throughout the region, in both the short term and long term. The short term program emphasizes relieving immediate bottlenecks around airports through arterial, intersection and interchange improvements, and increasing transit access to airports. Many of these improvements were programmed in the 2004 RTP, and are being updated for the 2008 RTP with strong local input from airport, city and county transportation planners.

SCAG is currently working closely with Los Angeles World Airports (LAWA) on planning and programming a regional system of FlyAways, based on the very successful Van Nuys FlyAway where passengers park their cars and take a bus to LAX. The locations of the proposed new FlyAways can be optimized by taking advantage of the region's developing high-occupancy vehicle (HOV) and light and heavy rail networks that can provide direct linkages to Ontario and Palmdale as well as LAX. Making seamless HOV and rail connections with enhanced service to those and other suburban airports will also comprise SCAG's short- and medium-range airport ground access strategy. The FlyAway, HOV and rail improvements to the suburban airports will help establish a pattern of decentralization, by attracting a critical mass of passengers and airline service

at those emerging airports. SCAG is also working with the newly-reactivated Southern California Regional Airport Authority (SCRAA) in it ongoing efforts to restructure and redefine its mission, with the focus of helping to implement the Regional Aviation Decentralization Strategy through facilitating key airport ground access improvements.

Over the long term, SCAG aviation demand modeling indicates that the region will also need a system of high-speed rail to the suburban airports to reach our adopted aviation forecasts, which are moderate and even conservative when compared to other forecasts for the region such as those developed by the FAA. The high speed, reliability and predictability of high speed airport access will be needed to overcome mounting and increasingly unpredictable traffic congestion. For example, the initial operating segment of SCAG's proposed high-speed rail system from West Los Angeles to Ontario Airport will take only 30 minutes to travel from end to end, compared to over two hours by car in 2030. The regional high-speed rail system is an integral component of the 2008 RTP Preferred 2035 regional aviation demand forecast, as discussed further in this Report.

Recent History of Regional Aviation Planning in the SCAG Region

The latest regional aviation demand forecasts and policies developed for the 2008 RTP represent an evolution and refinement of aviation planning work that SCAG has conducted over the last two decades. They also reflect a regional consensus that has developed around key regional aviation issue. Regional aviation planning that SCAG has conducted during this time period is summarized below, to place current planning for the 2008 RTP in proper perspective.

MILITARY AIR BASE AND AIR CARGO PLANNING IN THE 1990S

In the 1990s, the focus of the SCAG Aviation Program shifted from airport site selection studies to assessing the potential commercial use of military air bases in the region. This was in response to a windfall of potential new airports that was presented with the closing or downsizing of a number of military air bases in two rounds of base closures in1991 and 1993. These included Norton Air Force Base (now San Bernardino International) March Air Force Base (now March Inland Port and March Air Reserve Base), George Air Base (now Southern California Logistics), and Marine Corps Air Station El Toro. SCAG aviation planners assessed the potential of these bases, as well as NAS Point Mugu in Ventura County, in a military air base study conducted in 1994. Detailed joint use feasibility studies of Point Mugu and March Air Force Base were also developed in 1994 and 1997.

The notable feature of all of these studies was that they employed sophisticated computer model technology to generate and allocate demand to existing and hypothetical airports. This technology is based upon extensive passenger surveys taken at all air carrier airports in the region that allow the model to replicate how different kinds of passengers would choose airports in a regional system that offers a variety of airport choices. This technology, called the Regional Aviation Demand Allocation Model (RADAM) was an enormous improvement over how SCAG aviation planners previously developed regional aviation forecasts. Previous forecasts employed relatively crude manual techniques and subjective judgment in trying to determine the potential of new airports to attract passengers and cargo to them in competition with established airports.

In 1992, SCAG aviation planners completed the region's first regional air cargo study, which documented evolving trends in the air cargo industry, such as the counties in the region that produced the most air cargo, and the potential of airports to serve only cargo and few or no passengers. The cargo estimation methodologies developed for that study, along with the RADAM technology, were applied to a military/civilian joint use study of March Air Force Base joint use study completed by SCAG in 1997. The main recommendations of that study were that there were no insurmountable obstacles to joint use of March AFB, and that the base had great potential as an all-cargo airport. The findings of that study set the stage for the signing of a joint use agreement between

the U.S Air Force and the March Joint Powers Authority in 1997. After the March joint use study was completed, other former military bases in the Inland Empire, including San Bernardino International and Southern California Logistics, also became interested in the all-cargo concept.

1998 REGIONAL TRANSPORTATION PLAN

SCAG's aviation system study for the 1998 Regional Transportation Plan (RTP) employed the RADAM modeling technology, and included all of the recently downsized or closed military airports, as well as Palmdale Airport, as potential new airports. This was in addition to the existing air carrier airport system of LAX, Ontario, Burbank, Long Beach, John Wayne and Palm Springs airports. However, the 1998 system study did not assume any capacity constraints at any of the airports, either legally enforceable policy constraints or physical capacity constraints. This produced an allocation of 94 million air passengers (MAP) to an unconstrained LAX in 2020, or 60% of the total regional forecast of 157 MAP. This forecast generated a considerable amount of debate and controversy. It was adopted by the Regional Council for the 1998 RTP, but only conditionally. The attached condition was that the issues associated with an unconstrained forecast would be revisited in the 2001 RTP and the process would be guided by an Aviation Task Force made up of elected officials, airport managers, representatives of the aviation industry and other public organizations. The Aviation Task Force has guided the system planning work performed for all subsequent RTPs.

2001 REGIONAL TRANSPORTATION PLAN

For the 2001 aviation system study, the Aviation Task Force defined a total of eight new system scenarios for modeling analysis in addition to the 1998 plan. In defining these scenarios, considerable attention was given to recognizing legally-enforceable policy constraints at airports, such as the 41 flights per day restriction at Long Beach which translated to 3 MAP, and the settlement agreement at John Wayne airport which at that time imposed an 8.4 MAP cap at John Wayne. All of the scenarios assumed market incentives to attract passengers to outlying airports including major ground access improvements to decrease travel times, full passenger awareness through marketing programs, free or low cost parking, and free shuttle service from major activity centers. All of them except the No Project Alternative also assumed an interregional high speed rail system that would connect most of the airports in the system. The scenarios were distinguished primarily by whether or not they assume capacity improvements at LAX from its previously proposed master plan, and whether or not they assume El Toro in the system. The No Project scenario also has Ontario constrained to its existing physical runway capacity of about 30 MAP.

During the middle of the system study, aviation staff decided to conduct a new capacity analysis for LAX and the Burbank Airport (now Bob Hope) to update capacity figures inherited from previous studies. The new capacity figures for LAX and Burbank were 78 MAP (runway capacity) and 9.4 MAP (terminal gate capacity), respectively. Some scenarios also incorporated an 86 MAP level for LAX that corresponded to the LAX Master Plan Alternative C. Also, the later scenarios eliminated NAS Point Mugu from the system, because the Navy went on record as opposing joint use of that facility.

The scenario that was adopted by SCAG for the 2001 RTP has been called a Decentralized Aviation Plan for several reasons. The Plan holds LAX to its physical capacity of 78 MAP; respects physical or legally-enforceable policy constraints at urban airports including Burbank, Long Beach and John Wayne; includes El Toro; and spreads the service of aviation demand to airports in the Inland Empire and north Los Angeles County to the extent possible. All of those outlying airports are unconstrained, assume market incentives to attract passengers to them, and are connected by a high-speed rail system. The adopted regional aviation forecast for the 2001 RTP was 167 MAP in 2025.

2004 REGIONAL TRANSPORTATION PLAN

Shortly after aviation system planning work for the 2004 RTP was initiated in March of 2002, Orange County voters approved Measure "W" that changed the Orange County General Plan to designate MCAS El Toro property for park and education compatible purposes. That same month the Department of

Defense announced that it would sell El Toro land to private interests to be developed in a manner consistent with the new General Plan designation. The Aviation Task Force subsequently decided not to include El Toro in any of the new regional aviation demand scenarios that were modeled and evaluated for the 2004 RTP. Other unfolding realities that were incorporated in the modeling included the sharp downturn of aviation passenger and cargo activity after the events of September 11, 2001, and the impacts of new security requirements on passenger demand at air carrier airports, particularly LAX.

The loss of El Toro as a potential commercial airport for the region presented a new set of challenges in developing a new Regional Aviation Plan for the 2008 RTP. This was because RADAM modeling demonstrated that even with very high population and growth rates in the Inland Empire and North Los Angeles County, the bulk of regional aviation demand in 2030 will still be concentrated in Orange County and western Los Angeles County. With John Wayne Airport constrained to it Settlement Agreement constraint of 8.4 MAP, Orange County was forecast to serve only about 1/3 of its aviation demand in 2030. The main challenge was how to decentralize locally-unmet aviation demand in the urban areas of Los Angeles and Orange counties to underutilized suburban airports in the Inland Empire and North Los Angeles Country with available capacities.

A total of six new regional aviation scenarios were modeled for the 2004 RTP, ranging from a highly constrained scenario to a completely unconstrained scenario, with a number of "moderate" scenarios in between. The 2001 plan assumed that a new runway would be constructed at Ontario Airport (for a total of three runways) but due to opposition by the City of Ontario, the airport was assumed to retain its existing two-runway configuration in all of the scenarios. A capacity analysis of Ontario concluded that it has an existing physical capacity of 30 MAP.

The Preferred Scenario that was adopted for the 2004 RTP held existing urban airports to their physical or legally-enforceable capacity constraints, and decentralized demand to suburban airports with available capacity to the maximum extent possible. An intra-regional high-speed rail system to those airports was assumed, which boosted demand served at those airports by making the airport access trip from urban areas much faster, and more convenient and predictable in the face of mounting traffic congestion. Market incentives at the suburban airports were assumed, and as well as incentives to use the high-speed rail system such as "integrated pricing" that would combine high-speed rail fares with air fares in the total ticket price. The adopted regional aviation demand forecast for the 2004 RTP was 170 MAP in 2030.

The Regional Aviation Plan adopted for the 2004 RTP also proposed an implementation plan/plan of action to be prepared following adoption of the 2004 RTP. It would include a regional airport ground access improvement plan, a regional airport financial plan, and a regional airport management plan. SCAG prepared an Airport Ground Access Element for the 2004 RTP that specified projects for each air carrier airport that are needed to keep ground access congestion in its service area at acceptable levels. Over the last three years SCAG has completed two regional airport management studies that evaluated alternative regional airport governance structures. SCAG aviation staff is currently working closely with the newly-reactivated Southern California Regional Airport Authority to implement the findings and recommendations of those studies.

Regional Aviation Forecasts for the 2008 Regional Transportation Plan

Recommended 2035 regional aviation demand forecasts for commercial airports in the regional aviation system, for air passengers and cargo, are shown in Table 1 and Table 2. The recommendations are for both the 2008 RTP (constrained plan) and the 2008 Strategic Plan. As discussed in a later sectionl, the variations of the 2035 Preferred regional aviation demand scenarios that were modeled only vary by the different configurations of the HSRT system that were assumed. The regional aviation demand forecasts for the 2008 RTP and 2008 Strategic Plan are therefore consistent with the HSRT systems that are recommended to be included in these plans. For the 2008 RTP, the 2035 regional aviation demand forecast is based on the Preferred Scenario that as-

sumes the extended Initial Operating Segment (IOS) of the HSRT system, and for the 2008 Strategic Plan the forecast is based on the Preferred Scenario that assumes the full HSRT system. Assumptions and parameters used to model all of the regional aviation demand scenarios are described later in the Report, under the section entitled, Aviation Demand Modeling and Forecasting for the 2008 RTP.

TABLE 1 2035 REGIONAL AIR PASSENGER DEMAND ALLOCATIONS FOR 2008 REGIONAL TRANSPORTATION PLAN AND STRATEGIC PLAN (IN MILLIONS OF ANNUAL AIR PASSENGERS - MAP)

Air Carrier Airports	2008 Regional Transportation Plan	2008 Strategic Plan
Bob Hope	9.4	9.4
John Wayne	10.8	10.8
LAX	78	78
Long Beach	4.2	4.2
March Inland Port	2.5	2.5
Ontario	31.6	31.6
Palmdale	6.3	12.9
Palm Springs	4.1	4.1
San Bernardino	9.4	9.4
So. Cal. Logistics	2.9	4.0
Commuter Airports		
Imperial	3.5	3.5
Oxnard	1.7	1.7
Region Total	**164.4**	**172.1**

TABLE 2 2035 REGIONAL AIR CARGO DEMAND ALLOCATIONS FOR 2008 REGIONAL TRANSPORTATION PLAN AND STRATEGIC PLAN (X 1000 TONS)

Air Carrier Airports	2008 Regional Transportation Plan	2008 Strategic Plan
Bob Hope	86	86
John Wayne	45	45
LAX	2,496	2,496
Long Beach	134	134
March Inland Port	1,130	1,131
Ontario	1,959	1,959
Palmdale	781	812
Palm Springs	129	129
San Bernardino	1,290	1,290
So. Cal. Logistics	230	228
Region Total	**8,280**	**8,310**

Regional Aviation Policies

New regional aviation policies are recommended for the 2008 RTP with input from both the SCAG Aviation Task Force and the SCAG Aviation Technical Advisory Committee (ATAC). They respond to changing circumstances and new priorities in the regional aviation system. The recommended policies are divided into Aviation Guiding Principles and Aviation Action Steps, as follows:

AVIATION GUIDING PRINCIPLES

- Provide for regional capture of economic development opportunities and job growth created by the prospect of significant regional air traffic growth between now and 2035.
- Distribute maximum opportunity to Southern California airports where population and job growth are expected to be strong and where local communities desire air traffic for economic development.

- Reflect environmental, environmental justice and local quality of life constraints at existing airports that operate in built-out urban environments.
- Reflect that each county should have both the obligation and the opportunity to meet its own air traffic needs where feasible.
- Reflect that the region as a whole has an obligation to help pay the costs of airport environmental mitigation and ground access improvement in counties that serve a disproportionate share of regional air travel demand at their airports.

AVIATION ACTION STEPS

- Support capacity enhancements at existing and potential airports to handle anticipated increases in passengers and cargo volume where it is desired.
- Mitigate the effects of expanding airports and maximize air passenger and air cargo utilization of outlying airports in less-populated areas so that community impacts are minimized.
- Support the continued responsibility of SCAG for developing regional aviation and ground access plans for the region.
- Support the close cooperation between SCAG and the Southern California Regional Airport Authority (SCRAA) and other aviation organizations to facilitate the implementation of adopted regional aviation plans prepared by SCAG.
- Support legislative, marketing and ground access initiatives that promote the decentralization of aviation demand to under-utilized suburban airports where it is desired.
- Support more flexible use of airport revenues for off-airport ground access projects.
- Support giving priority to key airport ground access projects in the programming of transportation projects in the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP).
- Support a the development of a regional network of new flyaways that connect to multiple airports via HOV, light rail and commuter rail facilities, to help decentralize aviation demand to under-utilized suburban airports where it is desired.
- Support efforts to redesign the regional airspace system that may be needed to reduce significant conflicts and delays associated with future air traffic in SCAG's adopted 2035 regional aviation forecast.
- Support a more active role by the federal government in developing substantial incentives for airlines to upgrade their aircraft fleet to cleaner and quieter aircraft.

Aviation Demand Modeling and Forecasting for the 2008 RTP

For the 2008 RTP only three basic scenarios were modeled—an Unconstrained Scenario, a Constrained Scenario and a Preferred Scenario (with several variations, varied by different high-speed rail assumptions). This reflected a shrinking universe of possibilities with the loss of some potential commercial airports (i.e., El Toro and Point Mugu), and a regional consensus that had developed around some key issues. These consensus positions include a policy that LAX should be held to 78 MAP (runway capacity in 2001), that existing legally-enforceable policy and physical capacity constraints at urban airports should be respected, and that market incentives and ground access improvements should be used in the modeling to decentralize demand to suburban airport with the available capacity to the maximum extent possible.

New RADAM aviation demand modeling for the 2008 RTP incorporated updated assumptions about the impact of security screening at airports on passenger behavior, and the impact of rising fuel costs on air fares (a doubling of fuel prices in constant dollars by 2035 was assumed). For the first time air travel demand from San Diego County was assumed (San Diego International/Lindbergh Field was constrained to its physical capacity of 22.9 MAP) and demand served by commuter airports in Southern California was included (i.e., Oxnard, Imperial and Palomar airports).

UNCONSTRAINED SCENARIO

The Unconstrained Scenario is a hypothetical scenario that assumes no physical or policy constraints at any air carrier airport in the region. In other words, each airport is allowed to expand without constraints and serve as much demand as it can. It is used as a benchmark to compare other scenarios with in terms of how close they come to serving unconstrained demand, and how much unserved or "latent" demand they represent.

The 2035 Unconstrained Scenario reached a regional total of 192.4 MAP in 2035 (and 215.4 MAP including unconstrained demand from San Diego County). This only slightly higher than the 192.0 MAP 2030 Unconstrained Scenario modeled for the 2004 RTP, mainly due to the assumed doubling of real fuel costs. The Unconstrained Scenario represents a 3.93 percent average annual growth rate from 2005 to 2035. This is less than the 4.44 percent growth rate from 2005 to 2025 for the FAA's unconstrained Terminal Area Forecast for the Western-Pacific Region.

CONSTRAINED SCENARIO

The 2035 Constrained Scenario represents a very conservative vision of the regional airport system. It assumes no high-speed rail system, no market incentives, and very conservative behavior on the part of the airlines in investing adding flights at new and emerging airports. Like the other scenarios, it respects existing legally-enforceable policy and physical capacity constraints at urban airports.

In 2003 the Settlement Agreement at John Wayne Airport was amended to allow it to expand from 8.4 MAP to 10.8 MAP, so this new policy constraint was incorporated in the Constrained Scenario. A more detailed evaluation of the runway capacity constraint at Ontario Airport raised its constraint from 30.0 MAP to 31.6 MAP. The Bob Hope terminal gate constraint of 10.7 MAP that was used in the 2004 RTP was lowered to 9.4 MAP since Bob Hope Airport staff determined that the four remote aircraft parking gates assumed in the 2004 plan were no longer available for aviation uses. At the request of the March Joint Powers Commission, instead of assuming that March Inland Port was unconstrained, it was considered to be constrained by the 21,000 annual civilian operations allowed in the operative joint use agreement with the Air Force. A RADAM capacity analysis determined that this constraint equates to 2.5 MAP at March Inland Port, compared to an 8.0 MAP 2030 unconstrained forecast for March in the 2004 RTP. A refined capacity analysis of San Bernardino International's one-runway system produced a runway capacity constraint of 8.7 MAP. Neither March nor San Bernardino reached their capacity constraints in the Constrained Scenario due to its very conservative assumptions about future airline investment behavior.

The assumptions and parameters used to model the 2035 Constrained Scenario are as follows:

- LAX: 2001 runway capacity – 78 MAP
- Bob Hope: Existing terminal/gate capacity – 9.4 MAP
- Long Beach: Flight restriction of 41 flights/day – 3.2 MAP
- John Wayne: New Settlement Agreement – 10.8 MAP
- Ontario: Existing runway) capacity – 31.6 MAP
- San Bernardino and Palmdale: Charter, corporate & commuter/short haul
- March and Southern California Logistics: Cargo, charter and corporate
- San Diego International: Existing runway capacity – 22.9 MAP
- Oxnard, Imperial and Palomar: Corporate, charter and commuter only (Oxnard & Palomar – constrained ops)
- Planned (RTP) ground access improvements
- No market incentives
- No high-speed rail
- Doubling of aircraft fuel costs

RADAM modeling for the Constrained Scenario produced a regional total of 145.0 MAP in 2035 (169.2 MAP including constrained demand from San Diego County). The Constrained Scenario for the 2004 RTP totaled 140.8 MAP in 2030.

PREFERRED SCENARIO

The Preferred Scenario is very similar to 2030 regional aviation system adopted for the 2004 RTP. It respects all legally-enforceable policy and physical capacity constraints at urban airports, with the changes modeled by the Constrained Scenario previously described. It assumes much more willingness on the part of the airlines to invest in new flights at new and emerging airports than in the Constrained Scenario, and a package of market and ground access incentives including the following:

- For Palmdale, ground access reliability would be the same as other airports. This assumes that additional access routes will be constructed to decrease the dependence of Rte. 14 in providing ground access to Palmdale Airport
- For Palmdale, future air trip propensities in the Antelope Valley (PMD) increased by 15 percent to bring them closer to those in the San Fernando Valley. This assumes more high-income and high-tech employment in the Antelope Valley in the future
- For Palmdale, San Bernardino, March and Southern California Logistics airports: 100 percent of residents and 80 percent of non-residents are aware of airport choices. This assumes pervasive marketing campaigns, and automated internet-based booking systems
- Low-cost parking available at Palmdale, San Bernardino, March and Southern California Logistics airports
- Free shuttle service from major activity centers to Palmdale, San Bernardino, March and Southern California Logistics airports

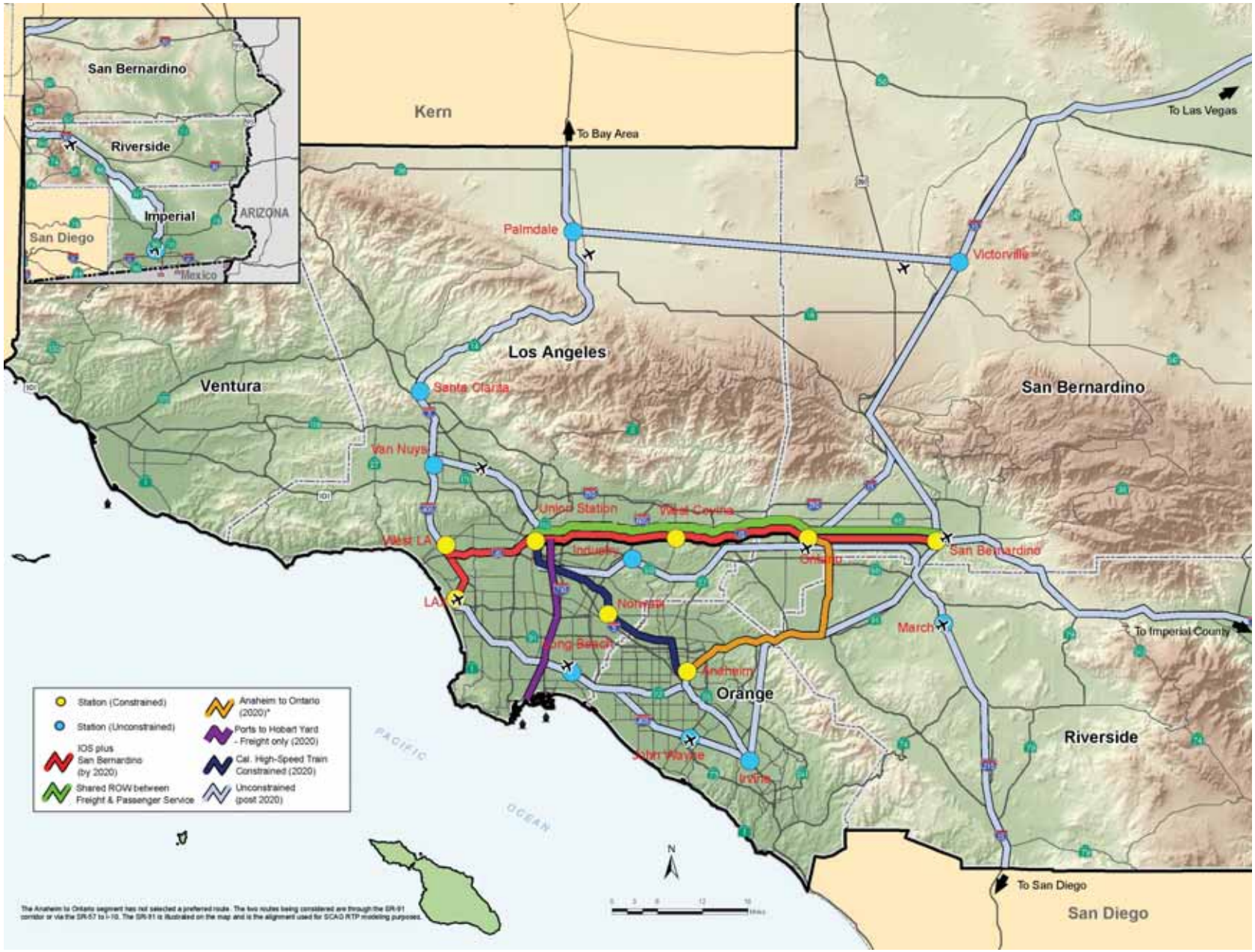
Several variations of the Preferred Scenario were run, that varied by what they assumed for high-speed rail connections between airports. High-speed access tends to boost demand to airports with available capacity, particularly if it connects them to urban demand centers in Los Angeles and Orange counties. This is because it makes the access trip to those airports much faster, convenient and predictable in the face of mounting traffic congestion on major highways and surface streets in the future. The full intra-regional high-speed regional transport (HSRT) system is shown in Exhibit 2.

The Preferred Scenario that was modeled with the full HSRT system produced a 2035 regional demand total of 172.1 MAP (197.5 MAP including demand from San Diego County). This is very close to the adopted 2030 forecast for the 2004 RTP of 170.0 MAP. A variation of this scenario with the HSRT line extended to Palm Springs Airport instead of a March Inland Port constrained to 2.5 MAP boosted the 2035 regional demand total slightly, to 174.3 MAP (199.7 MAP including San Diego). A Preferred Scenario with no HSRT system reached 155.0 MAP in 2035 (177.0 MAP including San Diego).

The final variation of the Preferred Scenario that was modeled incorporated an abbreviated version of the HSRT system, which is the Initial Operating Segment (IOS) running from West Los Angeles to Ontario Airport, and extending west to LAX and east to San Bernardino International. This variation of the Preferred Scenario reached 164.4 MAP in 2035 (189.8 MAP including San Diego).

The 2035 modeling results of all three four variation of the Preferred Scenario by airport, compared to the allocations of the Constrained Scenario, are shown in Table 3.

EXHIBIT 2 PROPOSED HIGH-SPEED REGIONAL TRANSPORT SYSTEM



Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

TABLE 3 2035 AIR PASSENGERS ALLOCATIONS FOR REGIONAL AVIATION DEMAND SCENARIOS (IN MILLIONS OF ANNUAL AIR PASSENGERS – MAP)

Air Carrier Airports	Constrained Scenario	Preferred Scenario without HSRT	Preferred Scenario with HSRT Extended IOS	Preferred Scenario with HSRT full system (to March Inland Port)
Bob Hope	9.4	9.4	9.4	9.4
John Wayne	10.8	10.8	10.8	10.8
LAX	78.0	78.0	78	78
Long Beach	3.2	4.2	4.2	4.2
March Inland Port	0.6	2.5	2.5	2.5
Ontario	31.6	28.8	31.6	31.6
Palmdale	2.6	6.3	6.3	12.9
Palm Springs	4.1	4.1	4.1	4.1
San Bernardino	2.9	3.3	9.4	9.4
So. Cal. Logistics	0.7	2.4	2.9	4.0
Commuter Airports				
Imperial	0.9	3.5	3.5	3.5
Oxnard	0.2	1.7	1.7	1.7
Region Total	**145.0**	**155.0**	**164.4**	**172.1**

AIR CARGO FORECASTS

Air cargo forecasts were developed for each of the 2035 scenarios that were modeled, except for the Unconstrained Scenario. The forecasts ranged from 7.6 million tons for the Constrained Scenario to over 8.3 million tons for a Preferred Scenario with the full intra-regional HSR system. The adopted 2030 air cargo forecast for the 2004 RTP was 8.7 million tons. There are a variety of reasons why the new air forecast is lower than the adopted forecast in the last RTP. These include more domestic cargo being transported by truck and train, more international air cargo over-flying the region on longer-range aircraft or flying the Arctic Circle route with a stop at Anchorage, and high value-to-weight goods such as computers forecast to be lighter per unit volume. The 2035 modeling results of the air cargo forecasts are shown in Table 4.

TABLE 4 2035 AIR CARGO ALLOCATIONS FOR REGIONAL AVIATION DEMAND SCENARIOS (X 1000 TONS)

Air Carrier Airports	Constrained Scenario	Preferred Scenario without HSRT	Preferred Scenario with HSRT Extended IOS	Preferred Scenario with HSRT full system (to March inland Port)
Bob Hope	86	86	86	86
John Wayne	45	45	45	45
LAX	2,621	2,574	2,496	2,496
Long Beach	109	139	134	134
March Inland Port	988	1,009	1,130	1,131
Ontario	2,086	2,117	1,959	1,959
Palmdale	463	658	781	812
Palm Springs	131	130	129	129
San Bernardino	831	1,072	1,290	1,290
So. Cal. Logistics	266	270	230	228
Region Total	**7,626**	**8,100**	**8,280**	**8,310**

AIRPORT GROUND ACCESS ELEMENT

The 2008 RTP will have localized ground access impacts at a number of airports. Particularly, the RTP will result in significant increases in airport activities (people as well as cargo) at Ontario, San Bernardino International, and Palmdale airports. RADAM modeling for the Preferred Scenario shows that airport traffic impacts are concentrated near airport areas but that background congestion affects both airports and local communities.

The Airport Ground Access element for the 2008 RTP updates the list of arterial, intersection, interchange and transit improvements recommended by the 20004 RTP. These projects, consistent with RADAM modeling for the 2035 Preferred Scenario, are those that are needed to keep congestion within defined airport service areas for each airport at acceptable levels. They also reflect substantial input from local aviation and transportation planning staff from airports, cities and counties on local policies and priorities for airport ground access improvements.

The recommended airport ground access projects are divided into constrained projects that have funding commitments (i.e. the 2008 RTP) and unconstrained projects that do not have funding commitments (i.e., the 2008 Strategic Plan). Funding for the constrained projects total $2.3 billion, and funding for all projects in the Airport Ground Access Element, both constrained and unconstrained, total $5.2 billion.

Profiles of Air Carrier Airports in the Region

BOB HOPE AIRPORT (BUR)

1. Role in regional aviation system
   a. Bob Hope Airport in Burbank, California is a very convenient airport for its local service area comprising the cities of Burbank, Glendale and Pasadena, with good access to and from Los Angeles and the San Fernando Valley. Service is provided by Alaska, Aloha, America West, American, Southwest and United airlines, with frequent schedules along the West Coast and connecting flights across the entire country.
2. Recent passenger and cargo trends
   a. Air passenger and cargo activity are expected to increase steadily

TABLE 5 PASSENGER AND CARGO LEVELS AT BUR

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	4.7	4.5	4.6	4.7	4.9	5.5	5.7
Cargo (million tons)	0.04	0.03	0.04	0.05	0.05	0.05	0.06

3. Airport location and acreage
   a. Location: 34° 12′ 02″ north latitude by 117° 21′ 31″ west longitude
   b. Acreage: Approximately 554.78 acres
4. Runway number and length
   a. Runway 15/33 – 6,886 feet long, 150 feet wide
   b. Runway 8/26 – 5,801 feet long, 150 feet wide
5. Terminal square footage and number of gates
   a. The BUR terminal is 212,000 square feet equipped with 14 gates
6. Hours of operation
   a. 24 hours General Aviation airport
   b. Commercial Service operations usually between 06:30 – 20:00 hours
7. Legal or physical capacity constraints
   a. The Airport Authority and the City of Burbank entered into an Airport Development Agreement in February 2005. The settlement outlines development guidelines for Bob Hope Airport over the next 10 years, including:

- The City will not change its zoning for the Airport, so that the Airport Authority may meet its facility needs consistent with that zoning for a period of seven years;
- The Airport Authority will not build a new passenger terminal for ten years and will not enlarge the current terminal during the agreement;

- The Airport Authority and City staff will jointly develop a strategy for addressing the desire for nighttime airport noise relief consistent with federal laws and procedures. This joint effort will include consideration of options within the Part 161 Study and options outside that process as well.

b. No stage 2 aircraft operations between 20:00 – 07:00

c. 14 aircraft parking positions/gates have a physical capacity of about 9.4 million air passengers (MAP)—SCAG analysis

8. Planned facility and ground access improvements

a. Construction of taxiway Delta to serve east west runway (est. 2008)

b. Parking restructuring

c. A new valet drop off/pickup zone

d. A new Pick-Up Center for a quicker exit from the airport

e. Reconstruction of I-5/Empire interchange with HOV access to the airport

f. Expansion of Burbank Bus Transit Center

g. Orange Line extension to the airport

JOHN WAYNE AIRPORT (SNA)

1. Role in regional aviation system

a. SNA is operated by the County of Orange and is the only commercial airport in Orange County. The service area includes 3 million people within the 34 cities and unincorporated areas of Orange County. In addition SNA is only one of two airports in Orange County to accommodate general aviation. SNA is served by three fixed-based operators and is home to more than 600 general aviation aircraft.

2. Recent passenger and cargo trends

a. SNA has served more than 100 million air passengers (MAP) since 1990. Designed to accommodate 8.4 MAP, the Riley Terminal has been serving approximately 9.6 MAP since 2006.

TABLE 6 PASSENGER AND CARGO LEVELS AT SNA

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	7.77	7.32	7.90	8.53	9.27	9.62	9.61
Cargo (tons)	18,119	16,146	15,646	15,406	20,152	24,073	23,903

3. Airport location and acreage:

a. Location: 33° 40′ 32″ north latitude by 117° 52′ 5″ west longitude

b. Acreage: 500.82

4. Runway number and length

a. Runway 01L/19R – 5700 feet long, 150 feet wide

b. Runway 01R/19L – 2887 feet long, 75 feet wide

5. Terminal square footage and number of gates

a. Terminal A and Terminal B square footage total is 448,505 square feet (Each Terminal has approximately the same square footage, so if you divide this in half, you get approximately 224,250 square feet – Terminal B concourse is just slightly longer than Terminal A, but generally the square footage is close to equally split.).

b. SNA has 14 jet-bridges with 2 remote gates at each end of the terminal.

6. Hours of operation

a. The terminal operates daily from 0600 – 2230 daily.

b. The tower is staffed from 0530 – 2200 daily.

c. The Administration Building is staffed from 0730 – 1700 Monday – Friday.

d. Airside Hours of Operations:

- Departures: 0700 to 2200 (Monday – Saturday), 0800 to 2200 (Sunday)
- Arrivals: 0700 to 2300 (Monday – Saturday), 0800 to 2300 (Sunday)

7. Legal or physical capacity constraints
   a. 1985 – Settlement Agreement - A Federal court settlement was signed in 1985 by the County of Orange, the City of Newport Beach, the Airport Working Group (AWG), and the Stop Polluting Our Newport (SPON) to formalize the consensus reached between the County of Orange and the local communities on the nature and extent of airport improvements and defined operational and capacity limitations on those improvements.
   b. The 2003 Amendments of the 1985 Agreement allow John Wayne Airport to increase passenger levels to 10.3 MAP (through 12/31/10) then to 10.8 MAP (through 12/31/15) with a maximum of 85 flights per day. In addition, the amendment allow for the addition of new jet-bridges (not to exceed 20 total).
   c. General Aviation Noise Ordinance – The Orange County General Aviation Noise (GANO) establishes single event noise limits and other restrictions for aircraft operating at JWA.
8. Planned facility and ground access improvements
   a. Construction of a new terminal building south of the existing facility that would provide up to six passenger-loading bridges. Two of the six new passenger-loading bridges would be equipped to allow Federal Inspection Services (FIS), including Customs. The new terminal building facility and the existing facility would be connected via a concourse approximately 360 feet in length on the secure side of the terminal. The anticipated footprint of the facility is approximately 100,000 sq. ft. and is proposed as a multi-level structure encompassing an arrival level, departure level and mezzanine. Terminal design would allow access to all 20 passenger-loading gates from either the existing or proposed terminal building. An additional commuter area would be provided within the new terminal building facility to the south to accommodate commuter activity in the southernmost terminal. Passenger access to the commuter facilities would be on the lower level and access to these aircraft would be through ground loading.
   b. An extension of the existing terminal to the north, providing four passenger departure areas and hold rooms as well as ground boarding locations for commuter flights. Passenger access to these facilities would be via a new enclosed escalator adjacent to the existing stairway from the upper level passenger departure areas to the lower level and access to the aircraft would be through ground loading
   c. An extension of the hydrant fueling system to serve the passenger gates in the new terminal building and support aircraft refueling activities in the South Remain Overnight Area and cargo operations areas located south of the new terminal building. The hydrant fueling improvements would extend the existing hydrant fueling system to allow for hydrant fueling at up to 40 aircraft parking locations.
   d. Construction of a new multi-story parking structure sufficient to accommodate the authorized passenger levels that will be served at JWA. The parking structure would be located south of the existing east parking structure in the area currently used for valet parking. The parking structure footprint would be approximately 150,000 sq. ft. and provide up to 3,200 additional parking positions when completed. The proposed parking structure would be located within the onsite roadway improvements described below. The existing upper level roadway return would be demolished and the lower level return may be retained to improve on-site traffic flow and construction staging.
   e. Expansion of the existing apron area to allow for the parking of up to 34 total RON commercial aircraft. Twenty aircraft would be parked at gated positions, ten aircraft will be parked in remote, non-gated positions, and four will be commuter aircraft parked at non-gated positions. This would occur by extending the apron south of the current

terminal where the air cargo operations currently occur. The RON area would be increased by approximately 165,000 square feet and necessitate changes to the size and location of the transient apron currently located between the existing RON area and the first leasehold south of the RON. As a result of this RON expansion, air cargo operations would be moved further south to accommodate the new terminal building and facilities, but still remain on the east side of the Airport.

f. Modification of the lease holdings area on the east side of the Airport immediately south of the existing air carrier RON. This would include construction of a new hangar on the leasehold immediately south of the existing south RON. The strengthening of an existing transient apron would be required to accommodate the aforementioned improvements.

g. Provision of an additional right-turn lane on westbound Campus Drive to Bristol Street North, as required with Mitigation Measure T-1 in Final Program EIR 582. This turn lane would increase the number of turn lanes on Campus Drive to a total of three. The turn lane addition would be approximately 250 feet long and 15 feet wide. This improvement would require the relocation of the existing airport maintenance building, from the southeast corner of the Airport to an undeveloped parcel on the west side of the Airport in the vicinity of the existing airport administration building. The proposed maintenance facility will be located on a 2.4-acre site west of Aircraft Rescue and Fire Fighting (ARFF) Station 33. The new maintenance building would occupy a footprint of approximately 27,800 sq ft, and the gross facility including outbuildings will be approximately 32,000 sq ft. The existing maintenance facility on airport property on the corner of Campus Drive and Bristol would be demolished.

h. Modification of ancillary airfield components, such as relocation of helicopter landing pads required due to the aforementioned transient apron improvements and RON expansion, improvements to Taxiway 'C' to accommodate increased aircraft weights and to allow for two-way traffic during the morning bank of flights, and Taxiway 'A' improvements to support the increased length of the RON area and new terminal building, and other changes required by project design.

i. Relocation of various parking operations including on-site employee parking, valet parking, and rental car areas to accommodate the new terminal building.

j. Removal of the Edison 66 KV substation located south of the southwest parking structure and in the footprint of the new terminal building. When the substation is removed and prior to the start of construction on the new terminal building, Preferred Emergency (PE) gear will be installed or a secondary feed from the Michelson substation will be established on the Airport to avoid potential loss of electrical service. The selected temporary, back-up electric power source will be removed when the Airport installs an electric co-generation plant on site as part of a separate, independent project currently in design.

LONG BEACH AIRPORT (LGB)

1. Role in regional aviation system

   a. Known as the Region's "Easy in, Easy Out" Airport, LGB offers direct flights throughout the U.S. with convenient domestic and international connections. LGB offers easy access to the surrounding business centers and massive consumer markets. LGB is one of the world's busiest general aviation airports that serve privately-owned aircraft. With substantial general aviation activity LGB is an important reliever airport for LAX. Very strict noise regulations on commercial air operations have been put into place at LGB to protect the surrounding residential land uses. LGB currently accommodates about 3 Million Annual Passengers (MAP) and can potentially grow to somewhere between 4.2 to 5 MAP. In addition, Boeing Co. builds C-17 military airlifter aircrafts at LGB and Gulfstream has a completion/service center at LGB.

2. Recent passenger and cargo trends

a. In 2006 LGB dropped to 2.7 MAP because American Airlines ceased flying out of LGB. The flight slots have been re-allocated, and it is expected that 3 MAP should be reached in 2007. The decline in cargo tonnage is due to a reduction of all-cargo daily flights from 5 to 4. Approximately 49,947 tons of cargo passed through LGB in 2006. General aviation has been growing steadily with 333,824 general aviation operations in 2006, and has experienced over 23 percent growth so far in 2007.

TABLE 7 PASSENGER AND CARGO LEVELS AT LGB

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	0.06	0.06	1.5	3.0	2.9	3.0	2.8
Cargo (million tons)	0.05	0.06	0.06	0.056	0.06	0.05	0.05

3. Airport location and acreage
   a. Location: 33° 49' north latitude by 118° 09' west
   b. Acreage: Approximately 1,170 acres
4. Runway number and length
   a. Runway 12/30 – 10,000 feet long, 200 feet wide
   b. Runway 7L/25R – 6,192 feet long, 150 feet wide
   c. Runway 7R/25L – 5,420 feet long, 150 feet wide
   d. Runway 16L/34R – 4,267 feet long, 75 feet wide
   e. Runway 16R/34L – 4,470 feet long , 75 feet wide
5. Terminal square footage and number of gates
   a. The LGB terminal is comprised of 56,320 square feet and includes 8 gates with 10 aircraft parking positions
6. Hours of operation
   a. 24 hours a day, 7 days a week (The Noise Compatibility Ordinance only permits airlines/commuters to schedule flights between the hours of 7am and 10pm)
7. Legal or physical capacity constraints
   a. The airport operates under the City of Long Beach's Airport Noise Compatibility Ordinance which limits the hours of operations for the airport. The Ordinance establishes cumulative noise budgets for airlines, commuters, charters, manufacturers, and general aviation. Airlines are guaranteed at least 41 daily flights (flights are defined as landings and takeoffs), and commuters are guaranteed at least 25 daily flights. Operational restrictions equivalent to a capacity of about 4.2 MAP
8. Planned facility and ground access improvements
   a. Long Beach City Council recently approved the design phase for terminal improvements; which include a terminal increase from 56,320 square feet to 89, 995 square feet.
   b. An increase in the number of aircraft parking positions from 10 to 12 slots has also been approved by City Council
   c. Additional on-site vehicular parking spaces have also been approved and will increase parking from 2,835 to 6,286 spaces.

LOS ANGELES INTERNATIONAL AIRPORT (LAX)

1. Role in regional aviation system
   a. LAX is the fifth busiest airport worldwide in terms of passengers and seventh worldwide in air cargo tonnage. LAX is served by approximately 80 passenger airlines, 20 cargo airlines and contributes more than $61 billion annually to the Southern California economy. LAX handles 70 percent of the passengers, 75 percent of the air cargo, and 95 percent of the international passengers and cargo traffic in the surrounding five counties. Approximately 408,000 jobs or one in twenty jobs are attributed to LAX operations in Southern California.

2. Recent passenger and cargo trends

   a. In 2005, more than 61 million passengers traveled through LAX. Rapidly becoming a major cargo center LAX has 1,000 cargo flights linking Los Angeles with the world. Its handling facilities include the 98-acre Century Cargo complex, the 57.4-acre Imperial complex, the Imperial Cargo Center and a number of terminals on the south side of the airport.

TABLE 8 PASSENGER AND CARGO LEVELS AT LAX

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	67.3	61.6	56.2	55.0	60.7	61.5	61.0
Cargo (million tons)	2.0	1.8	1.9	1.9	2.1	2.1	2.1

3. Airport location and acreage

   a. Location: 33° 56′ north latitude by 118° 24′ west longitude

   b. Acreage: 3,425

4. Runway number and length

   a. Runway 24R/6L – 8,925 feet long, 150 feet wide

   b. Runway 24L/6R – 10, 285 feet long, 150 feet wide

   c. Runway 25R/7L – 12, 090 feet long, 150 feet wide

   d. Runway 25L/7R – 11,095 feet long, 200 feet wide

5. Terminal square footage and number of gates

TABLE 9 LAX TERMINAL SQUARE FOOTAGE AND NUMBER OF GATES

Terminal	Square Footage	Gates
1	365,750	15
2	486,653	10
3	300,766	13
TBIT	993,244	12
4	354,039	13
5	489,875	13
6	404,856	13
7	601,936*	11
8		9
Remote	N/A	28

**LAWA: Terminal 7 & 8 use the same baggage and ticketing counter and work cohesively, thus there is no reason to distinguish between the square footage*

6. Hours of operation

   a. 24 hours a day, 7 days a week

7. Legal or physical capacity constraints

   a. Million annual passengers (MAP) are limited to 78.9 million passengers

8. Planned facility and ground access improvements

   a. Airport Surface Street Access Project Modifications are projects aimed to alleviate ground access congestions and to complement future growth.

   • Under Construction:

   LAX 1: Widen Sepulveda (Manchester - Lincoln Only)

   LAX 2 / LAX 4: Upgrade I-105 Off-ramps to Sepulveda

   LAX 8: Light Rail or Transit on Century Blvd. (No Widening)

   LAX 12: No Left Turn Lanes on Aviation /Airport

   • New Projects

LAX 28: Grade Separation on Douglas (El Segundo - Rosecrans for Green Line)

LAX 29: Additional Left Turn Lanes on La Cienega (NB) & at Centinela (SB)

- Tentative Plans

LAX 20/21: Lincoln Blvd.

LAX 23: I-10 HOV Lanes (SR 90-I105)

- Projects Deleted

LAX 9: Century to Sepulveda

LAX 17/26: Downgrade by the City of LA (RT lane additions)

9. December 7, 2004 – City Council approved LAX Master Plan, Alternative D and Final Environmental Impact Report, with LAX Specific Plan approved on January 20, 2005.

   a. LAX Specific Plan "Green Light" Projects (i.e., "Baseline" Phase I master plan projects that are eligible for immediate recommendations by the LAWA Executive Director to the Board of Airport Commissioners)

   - South Airfield Improvements – Extend the life of Runway 25L and to relocate it approximately 50 feet south to accommodate a new center taxiway between the south runways. The new center taxiways will improve airfield safety and reduce runway incursions. $333 million project cost. Summer 2008 Estimated Completion.
   - Intermodal Transportation Center (ITC) – A new ITC located at the northeast corner of Imperial Highway and Aviation Boulevard will provide the primary short-term parking for the airport and transit access (including pedestrian access to a Green Line light rail station) as well as access to the Central Terminal Area (CTA) via the Automated People Mover System.
   - Consolidated Rental Car Facility
   - Automated People Mover System
   - Tom Bradley International Terminal (TBIT) airside/landside improvements. Program features baggage handling system automation and Explosive Detection System (EDS) installation. TBIT new large aircraft gate modifications to accommodate the A-380 and B-747 dual loading at the north and south end of terminal. Mechanical, electrical and plumbing upgrades. Signage, paging, airline information display updates. Critical elevator/escalator upgrades. Security upgrades – CCTV, ACAMS. Americans with Disabilities Act (ADA) compliance and fire/life safety upgrades. First Class/Business Class lounge upgrades. Interior finish improvements. $723.5 million project cost. Construction begins January 2007 with a projected completion date of December 2009.
   - Reconfigured Tom Bradley International Terminal (TBIT) – New hold rooms and departure gates capable of handling wide-body aircraft will be added to the west side of TBIT to replace the existing remote hardstands on the west end of the airfield.
   - West Employee Parking – A new 12,000-space parking structure will be constructed on the west end of the airport to provide improved and consolidated employee security screening facilities. By locating this facility on the west side of the airport employee related traffic will be separated from local and passenger traffic.
   - Expanded FlyAway Program – The FlyAway program will offer customers exclusive access to the internal CTA curb front.

   b. LAX Specific Plan "Yellow Light Projects" (i.e., projects that must meet additional requirements prior to the Executive Director seeking an LAX Plan compliance, through a Specific Plan restudy)

   - Center Taxiways – The airport's north runway system will be reconfigured to accommodate a center taxiway and improve the separation between the runways. Runway 24L of the south runway system will be relocated approximately 340 feet south, which will require the demolition of existing Terminals 1, 2, and 3, and the northern portion of the Tom Bradley International Terminal (TBIT).

- Construction of Ground Transportation Center (GTC) – The GTC will be built in the northeast end of the airport and will serve as parking and curbside passenger pick-up and drop-off. This facility will replace the existing drop-off/pick-up curbside and long-term parking in Lot C.
- Roadway for the GTC
- Automated People Mover system connecting the GTC to the CTA

MARCH INLAND PORT (MIP), IATA CODE IS RIV

1. Role in regional aviation system
   a. MIP currently operates as an all-cargo airport serving regional air cargo demand for both domestic and international air cargo services
2. Recent passenger and cargo trends
   a. The airport currently is not accommodating passenger commercial operations
   b. DHL is a major cargo carrier that has operations at MIP. The forecast for cargo tonnage is expected to increase based on the current available figures.

TABLE 10 PASSENGER AND CARGO LEVELS AT MIP

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	0	0	0	0	0	0	0
Cargo (million tons)	0	0	0	0	0	9.24	43.96

3. Airport location and acreage
   a. Location: 34° 52′ 50″ north latitude by 117° 15′ 34″ west longitude
   b. Acreage: Approximately 300 acres
4. Runway number and length
   a. Runway 14/32 – 13,300 feet long, 200 feet wide
   b. Runway 12/30 – 3,010 feet long, 100 feet wide
5. Terminal square footage and number of gates
   a. None
6. Hours of operation
   a. 24 Hours
7. Legal or physical capacity constraints
   a. Upon announcement in 1993 by BRAC of realignment of March AFB to an air reserve base, the adjoining jurisdictions formed the March Joint Powers Authority (JPA) to address base reuse at March AFB. The March JPA, in addition to being designated as the federally recognized reuse authority for the former active duty base, has also assumed other responsibilities. These responsibilities are carried out by governing bodies under the governance umbrella of the March JPA .These authorities include:

- The March Joint Powers Redevelopment Agency – responsible for the redevelopment of 6,500 acres of the former active base and approximately 450 acres adjacent to the base in the industrial area of the City of Moreno Valley.
- A streamlined the development process with the transferred of land use authority to March JPA from the County of Riverside. The establishment of building codes and standards by the March JPA.
- Management of airport development and operation through March Inland Port Airport Authority (MIPAA).

   b. The Joint Use Agreement between the U.S. Air Force and the March JPA, signed in May, 1997, limits the base to 21,000 annual civil operations and 51,426 annual military operations (the civil operations are equivalent to about 2.5 MAP—SCAG analysis)
   c. Costs associated to later night and early morning operations (23:00 – 07:00) may be shared with carriers on a negotiated fee basis

d. Current cargo users account for approximately 5,000 of the 21,000 allowable annual civilian operations.

8. Planned facility and ground access improvements

   a. March Inland Port has over 600,000 square footage of future Ramp area planned for constructed. All planned facilities will be engineered to meet or exceed load requirements and to be fully stressed to accommodate aircraft up to 900,000 pounds.

   b. Upgrading of Van Buren/I-215 interchange

ONTARIO INTERNATIONAL AIRPORT (ONT)

1. Role in regional aviation system

   a. ONT is well situated to serve the future aviation needs of the Inland Empire and the Southern California Region for both cargo and passengers. Demand for air transportation will be created by the Inland Empire's rapid population growth; as well as its growth as a manufacturing and distribution center and the limited potential for expansion at LAX and other regional airports. The airport is the centerpiece of one of the fastest-growing transportation regions in the U.S. ONT is a medium-hub, full-service airport with commercial jet service to major U.S. cities and through service to many international destinations.

2. Recent passenger and cargo trends

   a. ONT offers over 380 daily flights to every major U.S. city; which has facilitated the increase in passenger traffic over the past 10 years. In 2006, 7 million passengers and 602,326 tons of air freight traveled through ONT. Due to its location at the center of a rapidly developing freight movement system that includes the airport, two railroads, four major freeways and an expanding network of freight forwarders; ONT is served by nine major U.S. air freight carriers.

TABLE 11 PASSENGER AND CARGO LEVELS AT ONT

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	6.8	6.7	6.5	6.5	6.9	7.2	7.0
Cargo (million tons)	0.5	0.5	0.5	0.6	0.6	0.6	0.5

3. Airport location and acreage

   a. Location: 34° 03' north latitude by 117° 36' west longitude

   b. Acreage: more than 1,700

4. Runway number and length

   a. Runway 26R/8L – 12,200 feet long, 150 feet wide

   b. Runway 26L/8R – 10, 200 feet long, 150 feet wide

5. Terminal square footage and number of gates

   a. Terminal 2 – 265, 000 square feet

   b. Terminal 4 – 265,000 square feet

   c. International Arrivals Terminal – 40,500 square feet

   d. ONT has 35 gates

6. Hours of operation

   - 24 hours a day, 7 days a week

7. Legal or physical capacity constraints

   a. Current policy prohibits flight training (touch and go's) by jet powered aircraft

   b. Current policy prohibits engine run-ups during late night hours (2200-0700)

   c. Current policy provides for the continuation of airport noise monitoring

   d. Current policy designates airport staff to deal with noise management issues

e. Current policy establishes a 24-hour noise complaint telephone line

f. Two-runway configuration has a physical capacity of 31.6 MAP (SCAG analysis)

8. Planned facility and ground access improvements

a. When passenger traffic at ONT reaches 10 MAP in two consecutive years, a third terminal will be constructed

b. Pacific Gateway Cargo Center Project: the approximately 96-acre project would consist of roughly one million square feet of interior space as well as approximately one million square feet of aircraft parking areas ("ramps"). The proposed project site also would include roads and surface lots for trucks and automobile parking. The construction site is west of the old terminal at the northwest corner of ONT. The EIR (Environmental Impact Report) for the project has been completed, and both the EIR and the lease are expected to be approved by the Board of Airport Commissioners in September or October 2007.

c. Planned grade separations at South Milliken, North Grove and San Antonio

d. Planned interchange improvements at I-10 and Grove, Vineyard and Euclid, and SR 60 at Mountain, Archibald, Euclid, Haven and Airport Dr.

e. Planned extension of Metro Gold Line to airport

PALM SPRINGS INTERNATIONAL AIRPORT (PSP)

1. Role in regional aviation system

a. PSP is one of the fastest growing airports in the U.S. and is expected to continue growing in relation to the forecasted growth in the Coachella Valley. Currently PSP is competing against the other airports in the Southern California region for passenger traffic. As the Coachella Valley population continues to grow, it is anticipated that PSP will play an integral part in the local and regional aviation demands.

2. Recent passenger and cargo trends

a. In 2006 PSP was ranked the sixth fastest growing airport in the U.S. and is projected to increase by 8 percent by 2050. Passenger growth is expected to continue at approximately 5% average year over year - cargo N/A.

TABLE 12 PASSENGER AND CARGO LEVELS AT PSP

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	1.28	1.17	1.11	1.25	1.37	1.42	1.53
Cargo (tons)	N/A	N/A	N/A	113	104	75	27

3. Airport location and acreage

a. Airport location: 33° 49' north latitude and 116° 30' west longitude

b. Acreage: 900 acres

4. Runway number and length

a. Runway 13R/31L – 10,000 feet long, 150 feet wide

b. Runway 13L/31R – 4952 feet long, 75 feet wide

5. Terminal square footage and number of gates

a. Bono Concourse 75,000sq.ft., 8 Gates:

b. Main Terminal 100,000sq.ft., 0 Gates after 9/15/07;

c. Regional Concourse 18,000sq. ft., 8 Gates (Completed September 2007)

6. Hours of operation

a. 24 hours a day, 7 days a week

7. Legal or physical capacity constraints

a. None

8. Planned facility and ground access improvements

a. New FAA control tower location search underway, expected completion 2012

b. New consolidated rental car facility is on hold pending master plan

c. New baggage claim processing facility is on hold pending capital improvement review

d. Terminal expansion: all estimates are subject to review when 2003 Master Plan Update is updated again in 2008. No information at this time

PALMDALE REGIONAL AIRPORT (PMD)

1. Role in regional aviation system

   a. PMD is located in the Antelope Valley, in the northeast portion of the city of Palmdale, on a 60-acre site on United States Air Force Plant 42. PMD is approximately 60 miles northeast of Downtown Los Angeles off State Highway 14.

   b. PMD is one of four airports owned and operated by LAWA, a City of Los Angeles department which also owns and operates Los Angeles International, Ontario International and Van Nuys. PMD serves the Antelope and Santa Clarita Valley areas as a regional airport providing short haul and feeder air service into larger hub airports. PMD is viewed as playing a key role in meeting the future demand for air travel in Southern California.

2. Recent passenger and cargo trends

   a. Regional Jet (RJ) Service to San Francisco International began on June 7, 2007 at LA/Palmdale. United Express offers two daily roundtrip regional jet flights to San Francisco International Airport, where travelers can connect to flights serving domestic and international destinations. There was no commercial service at the airport in 2006. About 4,900 passengers used the airport in 2005. No cargo service.

TABLE 13 PASSENGER AND CARGO LEVELS AT PMD

	2000	2001	2002	2003	2004	2005	2006
Passenger	NA	NA	NA	NA	0	4,877	65
Cargo	0	0	0	0	0	0	0

3. Airport location and acreage

   a. Location: 34° 37′ 45″ north latitude by 117° 05′ 04″ west longitude

   b. Acreage: LAWA currently leases 61.75 acres of land from the United States Air Force (USAF) under a Joint Use Agreement (JUA) that allows civilian operations on Air Force Plant 42 (AF Plant 42). LAWA also owns 17,750 acres adjacent to and to the east of AF Plant 42 available for future development.

4. Runway number and length

   a. Runway 7/25 – 12,002 feet long, 150 feet wide

   b. Runway 4/22 – 12,001 feet long, 150 feet wide

   c. Runway 72/252 – 6,000 feet long, 75 feet wide

5. Terminal square footage and number of gates

   a. The passenger terminal located on leased property on Air Force Plant 42 is 9,000-square feet served by an 11,000-square yard apron for parking civilian aircraft. There are no contact gates. The apron can accommodate up to two narrow body jet aircraft. The former SR Technics aircraft maintenance facility located on Site #9 is owned by LAWA and consists of approximately 312 acres adjacent to A.F. Plant 42 Hours of operation

6. Terminal hours: 8 a.m. to 7 p.m. daily

   a. The terminal is staffed by airport police 24 hours, but is open to the public from 0600-2230, daily.

   b. The control tower is staffed from 0530-2200, daily. Operations do not occur when the tower is closed.

c. A morning commercial flight will be added departing at 0600 in September so that will extend the hours for commercial operation. LAW is working with the military and FAA to extend the tower hours of operation.

d. General aviation operations are not allowed at PMD at any time unless they are connected with the military or military contractors on the base.

7. Legal or physical capacity constraints

a. LAWA's estimate for airfield capacity at PMD is:

Annual Service Volume (ASV): 225,000

VFR Hourly Capacity (Operations/Hour): 77

IFR Hourly Capacity (Operations/Hour): 59

b. LAWA's Joint Use Agreement with the Air Force currently allows up to 50 commercial operations per day but provides for a process to increase that limit to as high as 400 operations per day with the permission of the military.

8. Planned facility and ground access improvements

a. Space is available on the 61.75 acre leased site for expansion of the passenger terminal facility and for development of future cargo facilities. There is also land available to the south of the terminal area to expand the leasehold with Air Force approval. The Joint Use Agreement with the U.S. Air Force (USAF) sets forth procedures for the use of AF Plant 42 as a joint military/civilian use airport, defines the level of commercial operations that can take place by domestic civilian operators, and specifies guidelines for the use of the acreage owned by LAWA. The USAF has determined that at least 50 civilian commercial operations per day can be accommodated without detriment to the military mission of AF Plant 42. The JUA allows for incremental growth of operations levels up to 400 civilian operations per day with the approval of the USAF. The lease site itself can be expanded to accommodate at least the 1 Million Annual Passengers forecasted to use the facility in 2030. LAWA is working with the City of Palmdale, the MTA and Caltrans to identify needed ground access improvements. These could include enhanced Metrolink service to the airport. Additional detail on the LA/Palmdale Master Plan is below.

9. LA/Palmdale Regional Airport Master Plan

LAWA is in the process of developing a new Master Plan for LA/Palmdale Regional Airport (PMD). The purpose of the Master Plan is to analyze the local and regional issues that impact the airport and to address the following considerations: (1) determine the need to develop additional capacity at PMD through 2030, given the airport's current local market area; (2) determine the potential for PMD to play a larger role in the regional aviation system by accommodating demand beyond its market area considering the distance and travel time from the population centers; and (3) develop a plan that balances airport, economic and community goals in an environmentally sensitive and fiscally responsible manner.

The SCAG 2004 Regional Aviation Plan (RTP) proposes that a share of the total regional passenger and air cargo demand in the future be accommodated at PMD. The 2004 RTP Regional Aviation Plan proposes that PMD could play a significant role in accommodating passenger demand beyond its traditional service area if a high-speed rail system were developed that would allow easy access to PMD from the Los Angeles basin. SCAG also proposes significant changes in the way both the airports and the airlines do business today in order to stimulate growth of airline service at PMD. Many of these proposed changes would require changes in federal regulations regarding the ways that airports can set fees and spend money. With these services implemented, SCAG believes that PMD could attract as much as12.8 MAP by 2030.

Since the ability of the region to fully implement the SCAG Aviation Plan is uncertain at this time, LAWA has forecasted the demand for passenger air services at PMD to be 1.14 MAP by 2030 and has selected this forecast as a basis for master planning. This forecast was based on

expected population and employment growth within the airport's traditional service area. The service area primarily covers the Antelope and Santa Clarita Valleys and portions of the San Fernando Valley. The Master Plan forecasts were limited by the existing and forecasted population and employment growth within the airport's defined market area and the isolation of the airport from the regional population center in the general Los Angeles basin.

The PMD Master Plan is being developed in three phases. Phase I, Determination of Airport Requirements, included the collection and documentation of data regarding existing facilities at PMD, other aviation facilities in the region, and the community issues at large; the development of forecasts of aviation demand for the next 30 years; an analysis of existing airport capacity; and a determination of future airport facility requirements.

Phase II, Analysis of Alternative Development Plans, included the formulation of alternative development scenarios for the entire airport site, recommendations for use of land not required for aviation purposes, and an analysis of the local and regional roadway systems affecting PMD.

Phase III, Airport Improvement Implementation Plan, includes a 30-year implementation plan and environmental analyses, the Airport Layout Plan, cost estimates and an Airport Capital Improvement Plan, and a financial implementation strategy.

The Master Plan is currently in the final stages of Phase II, which will end with the completion of a Draft Master Plan. A Notice of Preparation for the environmental documentation was released in January 2005 to collect comments on the proposed plan and any alternatives that should be considered.

Three alternative improvement concepts have been developed to expand PMD facilities to meet the forecasted demand. All alternatives assume that PMD continues to share the AF Plant 42 airfield, but propose expansion of passenger and cargo facilities on and off AF Plant 42. All alternatives also include airside, landside and roadway improvements built in phases keyed to passenger and cargo growth. Improvements will include passenger terminal expansion; additional aircraft gates for passenger and cargo operations; expansion of airside facilities such as aprons and taxiways; expansion of automobile parking lots; construction or expansion of access roads; construction of air cargo facilities; and construction of support facilities.

Alternative 1, the Proposed Action, includes expansion of the terminal and apron within the existing terminal area on AF Plant 42 and development or expansion of additional facilities on AF Plant 42 outside the current leasehold. Alternative 2 includes development of a terminal building, apron and cargo facilities within an area on LAWA property called Site 9, with a connecting taxiway to the AF Plant 42 airfield. Alternative 3 includes development of a terminal building, apron and cargo facilities east of AF Plant 42, entirely on vacant LAWA property. All alternatives include a commercial/industrial development on LAWA property south of Avenue P. Commercial development of non-aviation property will help finance future infrastructure development.

LAWA is also developing a long-range strategic plan for PMD to show how the airport will accommodate passenger demand beyond 2030 or demand generated by the development of a high-speed rail system to PMD as suggested in the SCAG Aviation Plan in the 2004 RTP. The plan proposes a phased move to LAWA property as passenger volumes approach about 3 MAP. At that point, further investment in expansion on the Plant 42 leasehold would not be cost effective. Phased development of a new airport on LAWA owned property would be initiated, beginning with passenger terminal development. At build-out, the strategic plan will propose an airport that can handle at least the 12.8 MAP suggested by the SCAG plan, with two runways developed on LAWA property and connections to the AF Plant 42 airfield for additional capacity.

SAN BERNARDINO INTERNATIONAL AIRPORT (SBD)

1. Role in regional aviation system

a. SBD provides an optimal location for air cargo and logistics management for companies conducting businesses in Los Angeles, Southern California, Mexico and the US inter-mountain regions of Denver, Salt Lake City, Las Vegas and Phoenix. Centrally located just 60 miles (96.5 kilometers) east of the Los Angeles International Airport (LAX), SBD is surrounded by major interstate freeways (I-10, I-215 and I-30-/I-210), enjoys an excellent local surface transportation access, is in a congestion-free air corridor and is located within two miles of a major intermodal BNSF Railway facility. SBD is well positioned as a consolidation/distribution center for both air cargo and ground shipments.

2. Recent passenger and cargo trends

   a. No scheduled commercial passenger flights have taken place at SBD since 1998. However, commercial charter operators have utilized SBD (irrespective of the terminal building) during the 2000 – 2005 periods.

   b. In 2002 it was estimated that approximately 12 large all-cargo aircraft used SBD (9 Antonov AN-24's, 2 Boeing 747's and 2 Convair 640's). Specific cargo operation information is not available. In addition, numerous cargo aircraft operate at SBD commonly through the FBO.

TABLE 14 PASSENGER AND CARGO LEVELS AT SBD

	2000	2001	2002	2003	2004	2005	2006
Passenger	249	217	234	1084	206	44	N/A
Cargo (million tons)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SBD: Specific cargo information is not available.

3. Airport location and acreage

   a. Location: 34° 05' 43" north latitude by 117° 14' 06" west longitude

   b. Acreage: Approximately 1,300 acres

4. Runway number and length

   a. Runway 6/24 – 10,001 feet long, 200 feet wide

5. Terminal square footage and number of gates

   a. From 2000 – 2005 SBD was equipped with two passenger gates at its 66,560 square feet terminal building.

6. Hours of operation

   a. SBD is open 24 hours per day, 365 days per year, and a 24 hour prior notification is required for commercial passenger operations

7. Legal or physical capacity constraints

   a. Airfield capacity is affected by:

   - Traffic coordination with other airports
   - High terrain affecting ILS minimums

8. Planned facility and ground access improvements

   a. Widening projects between Waterman and Mt. View Ave. – widen from 2 – 4 lanes between Tippecanoe and Mt. View, adding curbs, sidewalks and lighting

   b. Widening of 3rd and 5th streets from Tippecanoe to Palm

   c. Improvement to shoulder on Victoria, Del Rosa and Sterling Ave. from 3rd to 6th Streets.

   d. A new 4-lane bridge at Mountain View over the Santa Ana River

   e. Extension of Mountain View from Palm Meadow to I-10

   f. Upgrading of Waterman/I-10 and Mill/I-215 interchanges

   g. There is no near term plan for constructing a passenger terminal on the north end of the airfield--the existing terminal is being expanded and refurbished. The cargo terminal construction is listed on the Airport Capital Improvement Plan, but funding has not been programmed.

   h. The airport's air traffic control tower is being refurbished and will be operational in early 2008

i. 40 new small hangars and a several large hangars on the runway's east side to be constructed

SOUTHERN CALIFORNIA LOGISTICS AIRPORT (VCV)

1. Role in regional aviation system
   a. The Southern California Logistics Airport specializes in goods movement and is a potential world class facility for serving international and domestic air cargo needs. The airport provides ground, air and rail transportation for the "fastest-to-market" delivery. The airport is capable of accommodating both military and commercial aircrafts. The Southern California Logistics Airport facility features two intercontinental runways including a 15,050 foot runway, allowing the heaviest aircraft direct, non-stop access to any destination in the world and a 10,000 foot runway. The air control tower operates 24 hours a day and has emergency response capabilities that are comparable to the world's largest airports.
2. Recent passenger and cargo trends
   a. PAX (military personnel for the National Training Center (NTC) and Twenty Nine Palms) board aircraft on the open ramp through the NTC leasehold.
   b. Cargo was below 1,000 during 2003, 2004, and 2005. Right now it is hovering at around 1,000 tons annually. Signs suggest it will continue to increase.

TABLE 15 PASSENGER AND CARGO LEVELS AT VCV

	2000	2001	2002	2003	2004	2005	2006
Passenger (millions)	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Cargo (million tons)	0.006	0.007	0.001	<0.001	<0.001	<0.001	0.001

3. Airport location and acreage
   a. Location: 34° 35′ 50″ north latitude by 117° 22′ 58″ west longitude
   b. Acreage: 3,000 acres
4. Runway number and length
   a. Runway 17/35 – 15,050 feet long, 150 feet wide
   b. Runway 03/21 – 9,168 feet long, 150 feet wide
5. Terminal square footage and number of gates
   a. Terminal Building is approximately 10,000 square feet
   b. No gates
6. Hours of operation
   a. 24 hours a day, 7 days a week
7. Legal or physical capacity constraints
   a. None
8. Planned facility and ground access improvements
   a. A two lane road adjacent to I-15 is being increased to a four lane road which should be completed within a 12 month period.
   b. Construction of additional large maintenance hangars and corporate aircraft hangars.
   c. Construction a new fuel farm within the next 12 months.
   d. Runway 3/21 will be reconstruction within the next couple of years.